2011-03-15 Tuesday Morning Notes

Tuesday, March 15, 2011
5:00 AM

On-call

- Monday/Tuesday: Al
- Wednesday/Thursday: Tony
- Friday: DVM

Stacking and Transfers

- Stacked 26.3mA/hr with a production of 22.2 pbar/Mp with 8.02 Tp on target
  - Beam on target is back up
  - Tune efforts during the day improved stacking.
- Unstacked 591E10 in 72 transfers over 24 sets with an overall efficiency of 94%
  - Take out all transfers over 35mA and we are still only 94.5%
  - We are down a solid 2% in transfer efficiency.
  - Orbits, fudge factor, and energy match all look good.

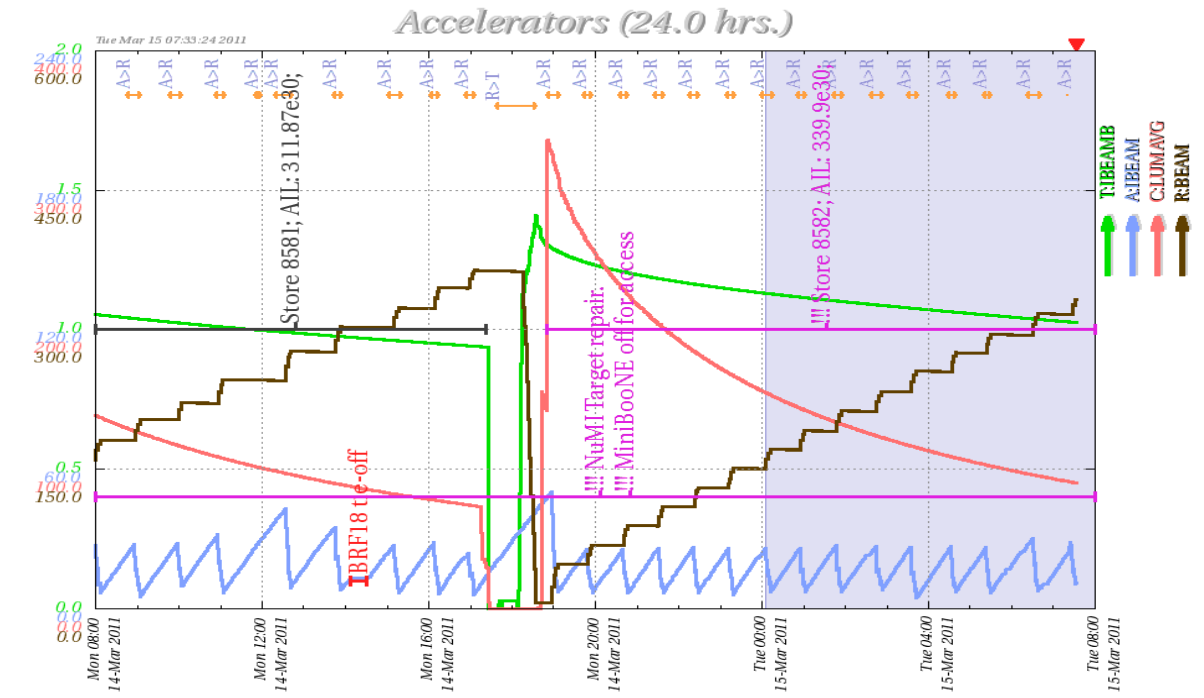
Interesting Happenings

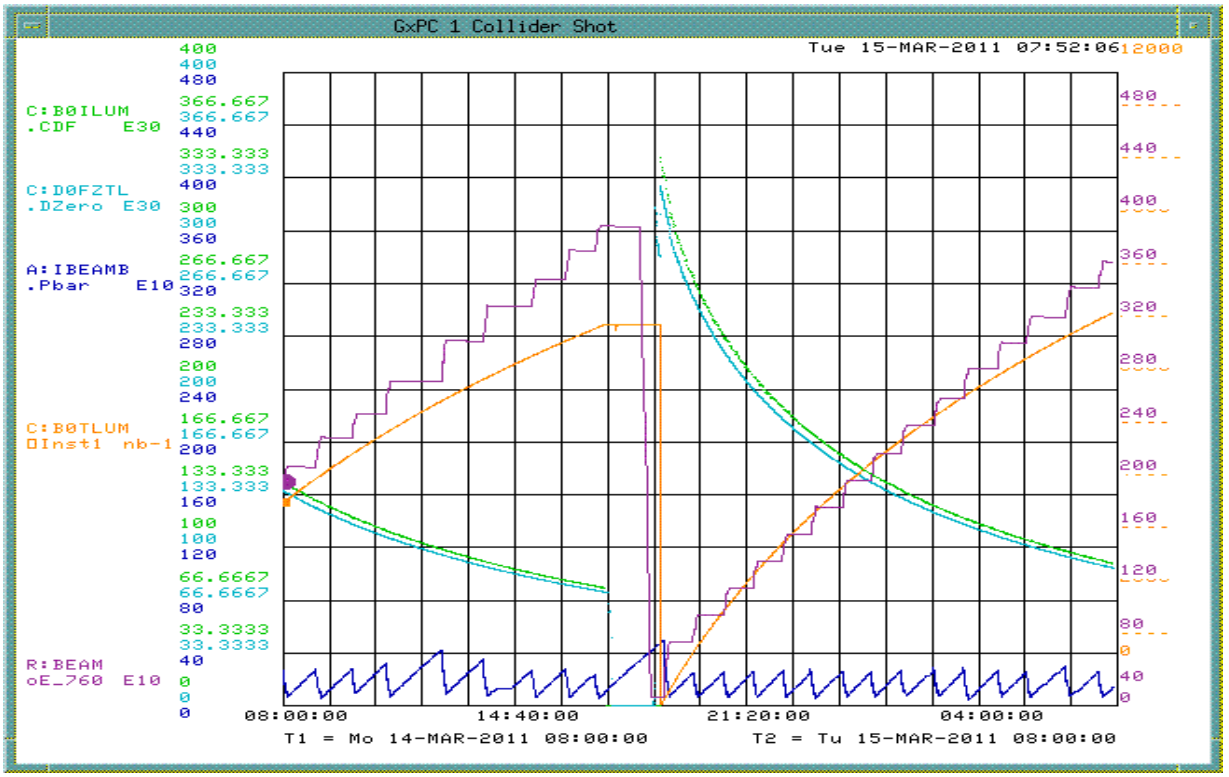
- There have been a number of ARF1 trips. We have an indication on one of the trips that is was the ARF1-1 driver fan. Need 30 minutes of downtime to replace.
- A:BS309 has been behaving. Bernie is ready for repairs if necessary.

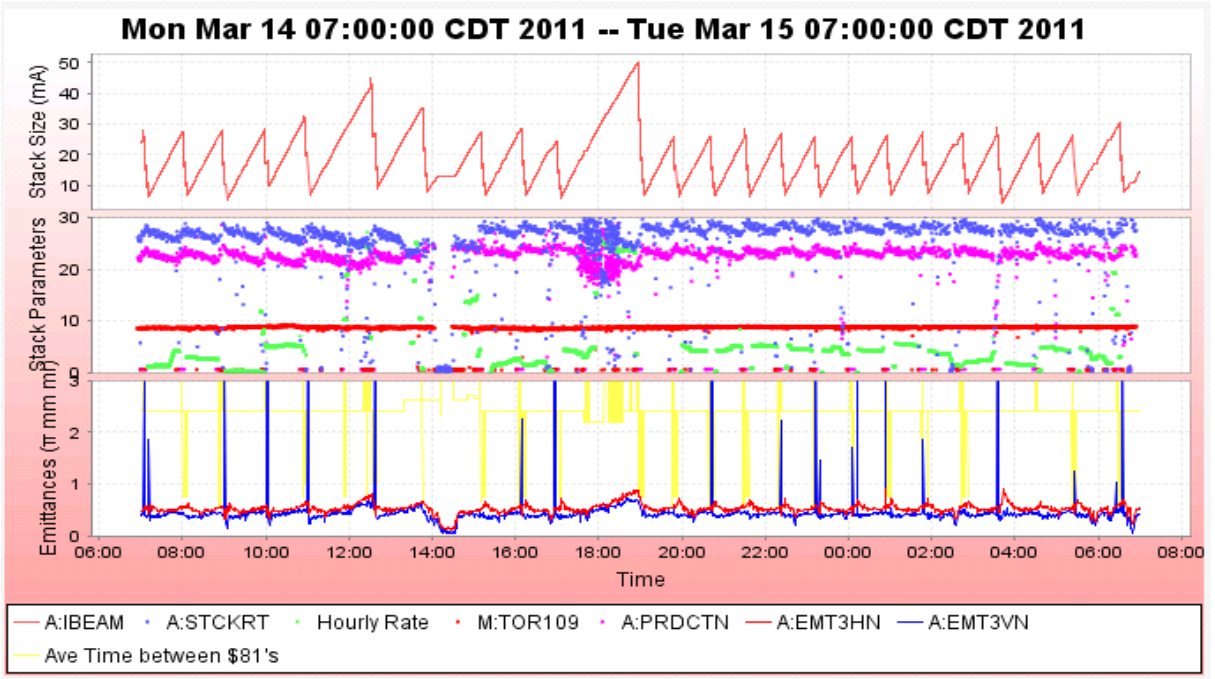
Numbers

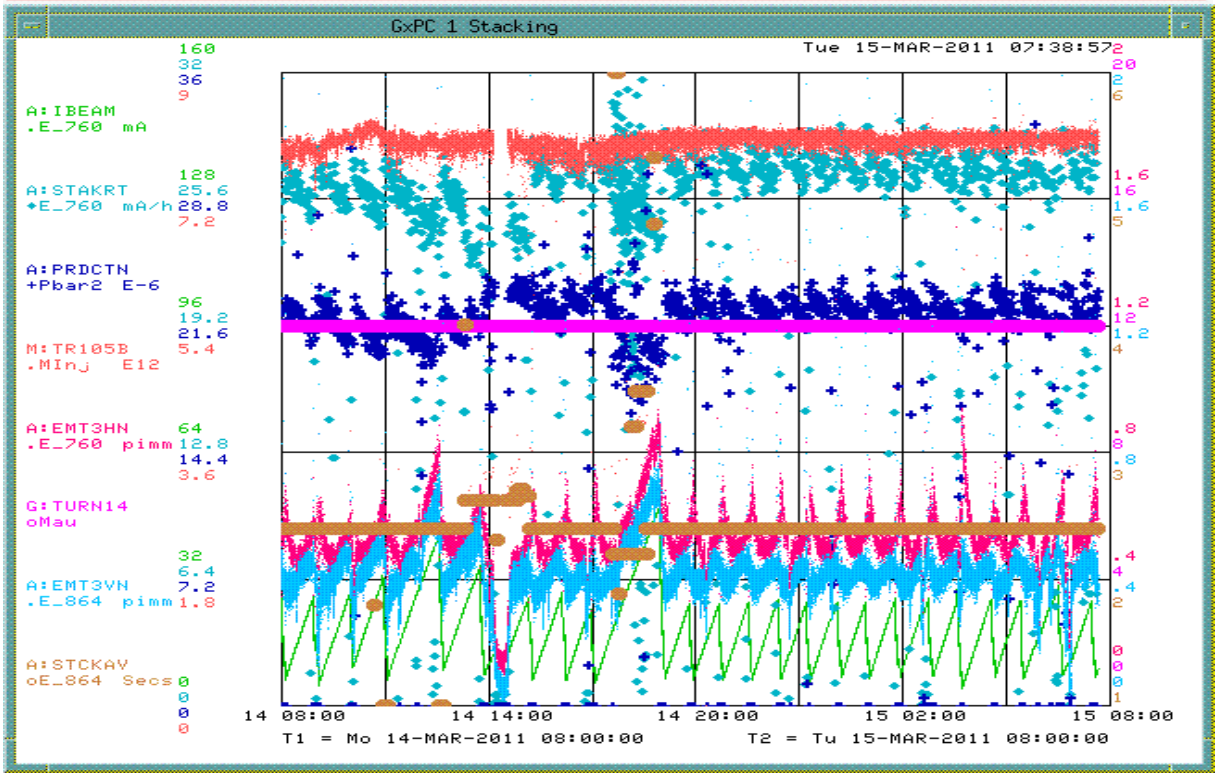
- Stacking
  - Pbars stacked: 578.42 E10
  - Time stacking: 23.39 Hr
  - Average stacking rate: 24.73 E10/Hr
- Uptime
  - Number of pulses while in stacking mode: 34564
  - Number of pulses with beam: 33279
  - Fraction of up pulses was: 96.28%
- The uptime's effect on the stacking numbers
  - Corrected time stacking: 22.52 Hr
  - Possible average stacking rate: 25.69 E10/Hr
  - Could have stacked: 600.75 E10/Hr
- Recycler Transfers
  - Pbars sent to the Recycler: 573.01 E10
  - Number of transfers : 70
  - Number of transfer sets: 25
  - Average Number of transfer per set: 2.80
  - Time taken to shoot including reverse proton tuneup: 00.24 Hr
  - Transfer efficiency: 93.65%
- Other Info
  - Average POT : 8.00 E12
  - Average production: 21.72 pbars/E6 protons

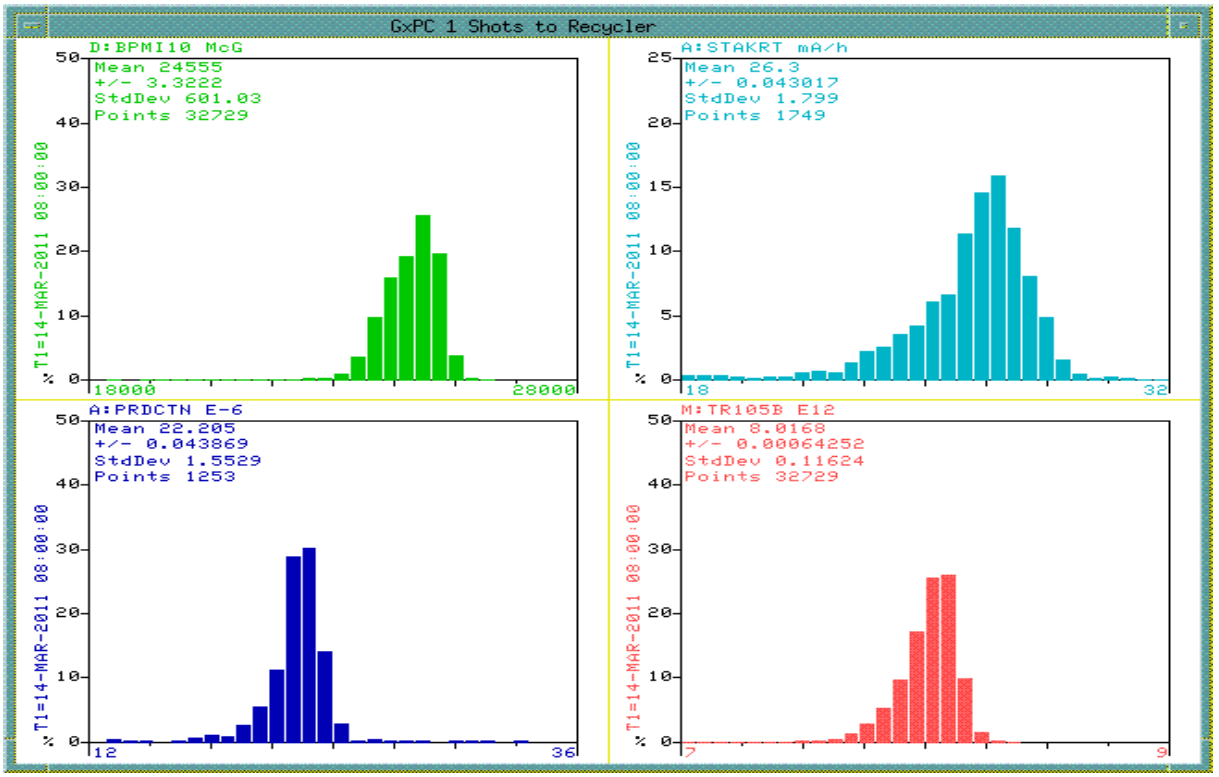
Plots

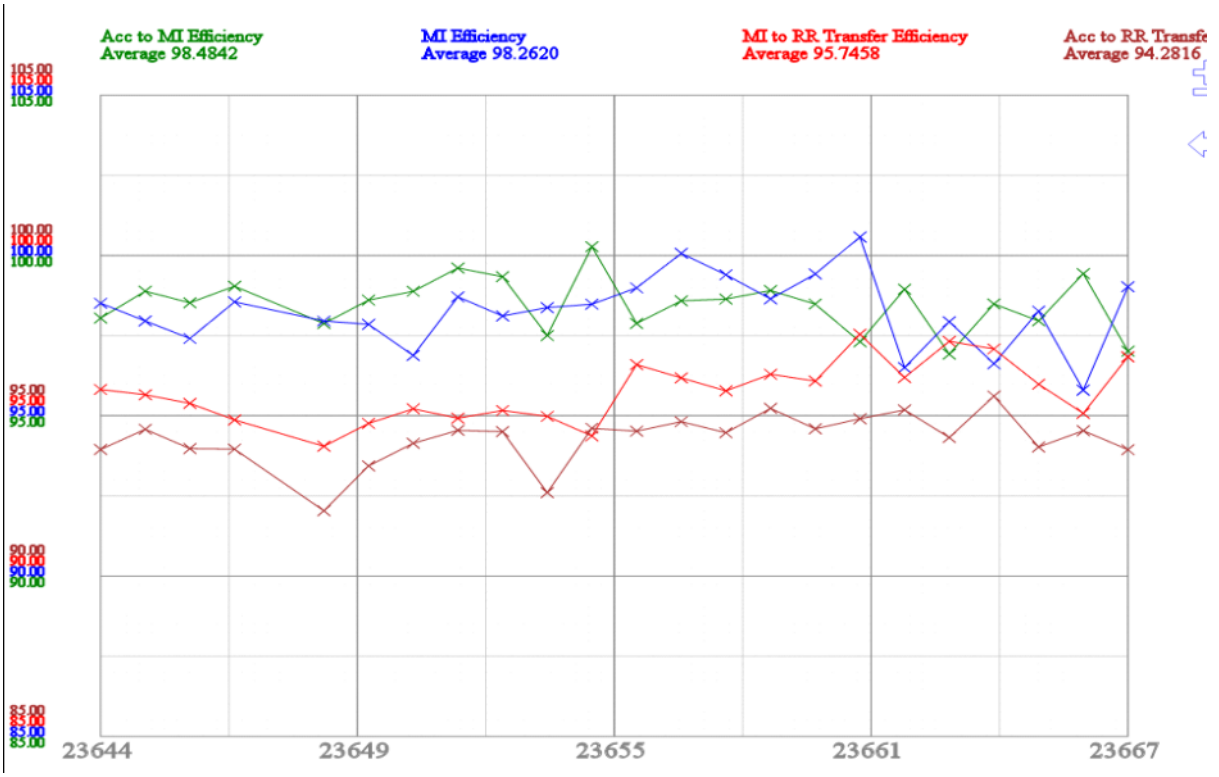

Accelerators (24.0 hrs.)
Tue Mar 15 07:33:24 2011
Store 8581; AIL: 311.87e30;
!!! NuMI Target repair:
!!! MiniBooNE off for access
!!! Store 8582; AIL: 339.9e30;
IBRF18 tc-off
T:IBEAMB
A:IBEAM
C:LUMAVG
R:BEAM
Mon 08:00 14-Mar 2011
Mon 12:00 14-Mar 2011
Mon 16:00 14-Mar 2011
Mon 20:00 14-Mar 2011
Tue 00:00 15-Mar 2011
Tue 04:00 15-Mar 2011
Tue 08:00 15-Mar 2011


GxPC 1 Collider Shot
Tue 15-MAR-2011 07:52:06
C:B0ILUM
.CDF E30
C:D0FZTL
.DZero E30
A:IBEAMB
.Pbar E10
C:B0TLUM
0Inst1 nb-1
R:BEAM
oE_760 E10
08:00:00
14:40:00
21:20:00
04:00:00
T1 = Mo 14-MAR-2011 08:00:00
T2 = Tu 15-MAR-2011 08:00:00

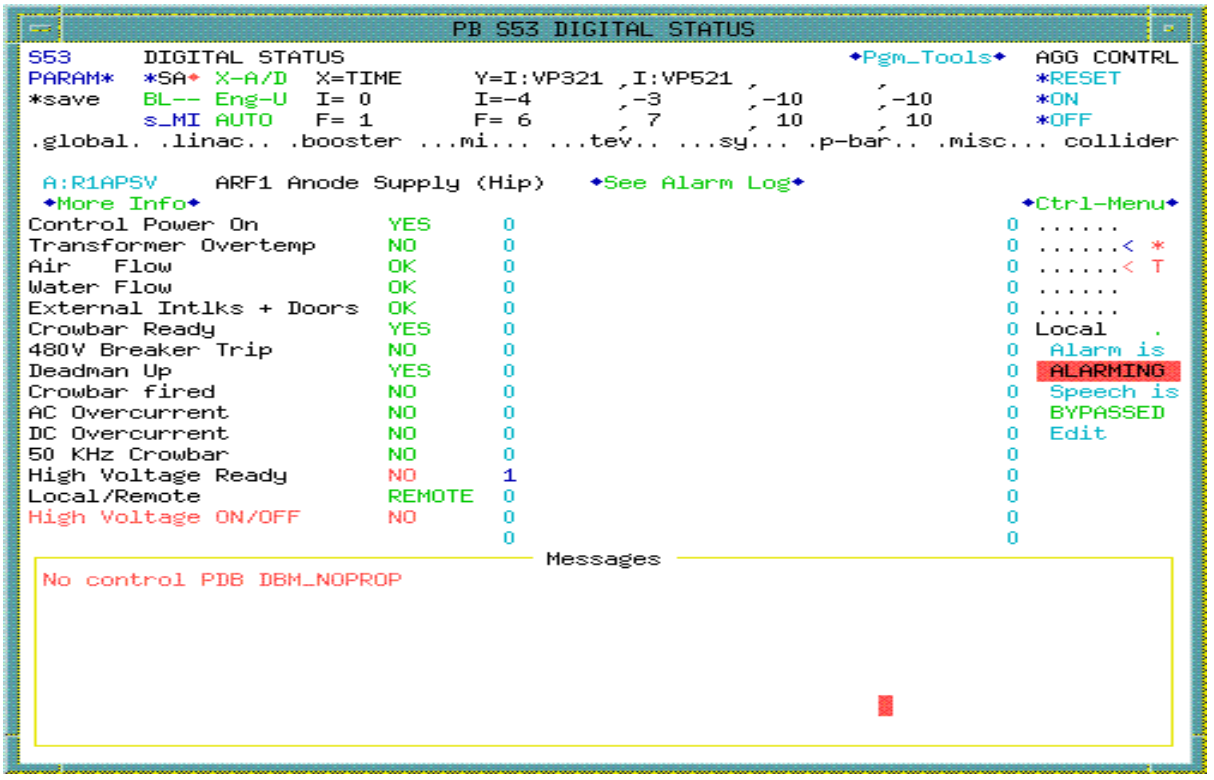

Mon Mar 14 07:00:00 CDT 2011 -- Tue Mar 15 07:00:00 CDT 2011
Stack Size (mA)
Stack Parameters
Emittances (π mm mr)
Time
A:IBEAM
A:STCKRT
Hourly Rate
M:TOR109
A:PRDCTN
A:EMT3HN
A:EMT3VN
Ave Time between $81's

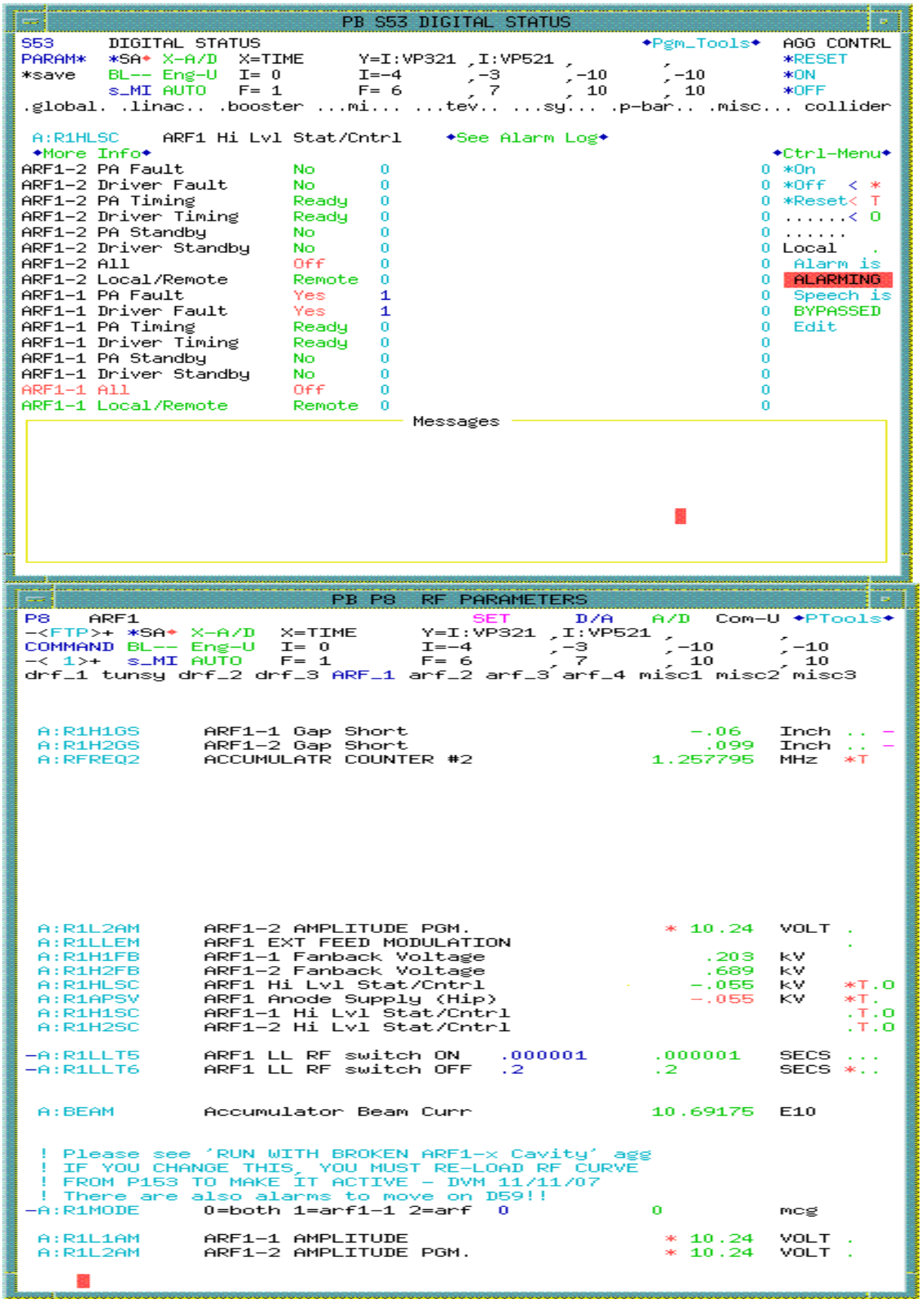

GxPC 1 Stacking
Tue 15-MAR-2011 07:38:57
A:IBEAM
.E_760 mA
A:STAKRT
+E_760 mA/h
A:PRDCTN
+Pbar2 E-6
M:TR105B
.MInj E12
A:EMT3HN
.E_760 pimm
G:TURN14
oMau
A:EMT3VN
.E_864 pimm
A:STCKAV
oE_864 Secs
14 08:00
14 14:00
14 20:00
15 02:00
15 08:00
T1 = Mo 14-MAR-2011 08:00:00
T2 = Tu 15-MAR-2011 08:00:00

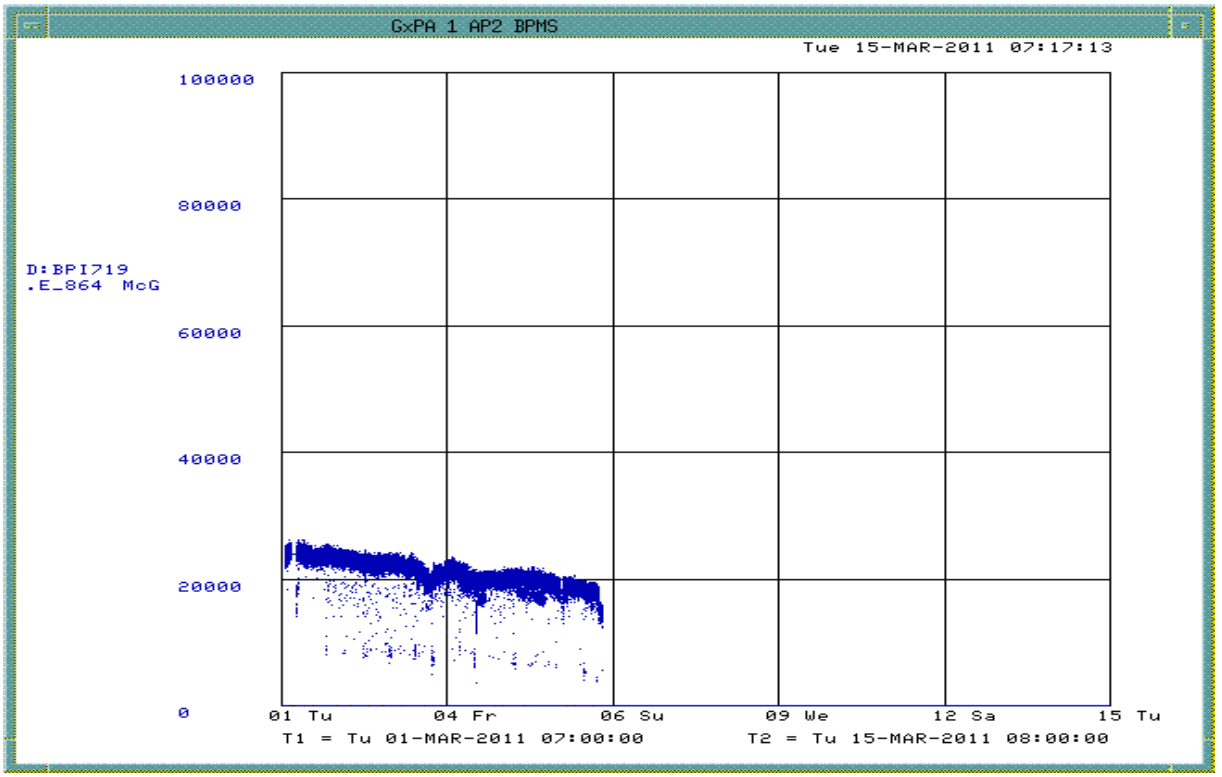

GxPC 1 Shots to Recycler
D:BPMI10 McG
Mean 24555
+/- 3.3222
StdDev 601.03
Points 32729
A:STAKRT mA/h
Mean 26.3
+/- 0.043017
StdDev 1.799
Points 1749
A:PRDCTN E-6
Mean 22.205
+/- 0.043869
StdDev 1.5529
Points 1253
M:TR105B E12
Mean 8.0168
+/- 0.00064252
StdDev 0.11624
Points 32729
T1=14-MAR-2011 08:00:00


Acc to MI Efficiency
Average 98.4842
MI Efficiency
Average 98.2620
MI to RR Transfer Efficiency
Average 95.7458
Acc to RR Transfe
Average 94.2816
105.00
100.00
95.00
90.00
85.00
23644
23649
23655
23661
23667

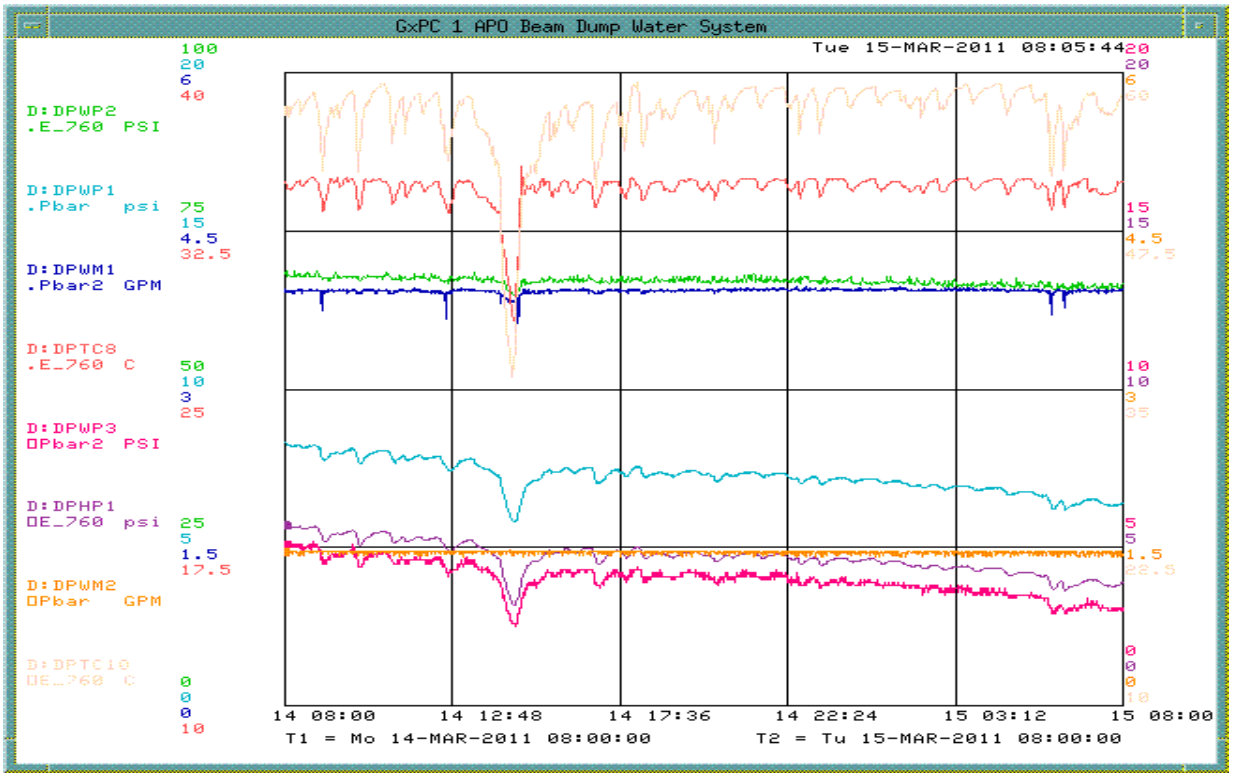
Column 1 Number_0_Pbar Transfer Shot #	Column 4 Number_3_Transfer Time		Column 21 Number_20_A:IBEAMB sampled on $91 (A:BEAM7), E10	Column 22 Number_21_A:IBEAMB sampled on $94 (A:BEAM9), E10	Unstacked (mA)	Column 23 Number_22_R:BEAMS (R:BEAME0[0]) pre xfer E10	Column 24 Number_23_R:BEAM (R:BEAME0[1]) post xfer, E10	Stashed	Acc to RR Eff	Acc to MI Eff	Acc to MI2 Eff	Acc to MI * Acc to MI2 Efficiency	Transfers	Sets	Column 5 Number_4_Acc Horizontal Emittance	Column 6 Number_5_Acc Vertical Emittance	Column 8 Number_7_Acc Longitudinal Emittance
	Totals =>				591.84			556.37	94.01%	98.41%	96.59%	95.06%	72	24	5.2491	3.9591	1.954
	Daily Average =>				591.84			556.37					72	24			
23668	Tuesday, March 15, 2011	7:27	26.43	6.96	22.06	316.61	337.00	20.82	94.40%	98.44%	95.22%	93.73%	3	1	5.453	4.152	1.979
23667	Tuesday, March 15, 2011	6:30	30.51	7.72	25.32	294.35	317.63	23.77	93.88%	96.82%	95.98%	92.92%	3	1	5.603	4.205	1.943
23666	Tuesday, March 15, 2011	5:23	26.49	6.85	21.84	274.95	295.28	20.64	94.50%	99.39%	95.02%	94.44%	3	1	5.208	4.137	1.98
23665	Tuesday, March 15, 2011	4:33	26.96	7.09	22.11	255.09	275.54	20.80	94.08%	97.99%	96.23%	94.30%	3	1	4.969	3.904	1.965
23664	Tuesday, March 15, 2011	3:35	26.57	4.44	24.08	232.97	255.70	23.04	95.69%	98.53%	96.41%	94.99%	3	1	5.029	3.124	1.864
23663	Tuesday, March 15, 2011	2:44	27.05	7.42	22.62	212.44	233.43	21.32	94.24%	97.08%	94.92%	92.14%	3	1	5.426	4.112	1.98
23662	Tuesday, March 15, 2011	1:47	27.39	7.22	23.07	191.20	212.83	21.92	95.01%	98.96%	95.69%	94.70%	3	1	5.125	3.822	1.972
23661	Tuesday, March 15, 2011	0:55	26.23	6.92	21.92	170.99	191.54	20.80	94.89%	97.49%	98.01%	95.54%	3	1	5.208	3.916	2.022
23660	Tuesday, March 15, 2011	0:05	26.01	7.03	21.92	150.76	171.28	20.71	94.48%	98.67%	98.13%	96.83%	3	1	5.133	3.898	1.973
23659	Monday, March 14, 2011	23:12	26.07	6.03	22.18	130.10	150.99	21.12	95.22%	98.60%	97.34%	95.98%	3	1	4.772	3.497	1.959
23658	Monday, March 14, 2011	22:22	26.73	6.76	22.25	109.45	130.29	21.05	94.60%	98.57%	97.94%	96.54%	3	1	5.214	3.82	1.977
23657	Monday, March 14, 2011	21:31	26.21	6.35	22.07	89.04	109.66	20.85	94.48%	98.41%	98.16%	96.60%	3	1	5.158	4.038	1.986
23656	Monday, March 14, 2011	20:40	25.91	6.47	22.02	68.56	89.19	20.81	94.53%	98.36%	96.94%	95.36%	3	1	5.18	3.971	1.967
23655	Monday, March 14, 2011	19:48	25.75	6.31	22.04	48.00	68.71	20.84	94.56%	99.80%	98.27%	98.07%	3	1	5.14	3.995	1.957
23654	Monday, March 14, 2011	18:57	50.41	6.72	46.67	6.19	48.34	42.85	91.81%	97.54%	95.13%	92.79%	4	1	6.508	4.653	1.869
23653	Monday, March 14, 2011	16:58	24.39	5.87	21.02	344.76	364.20	19.86	94.48%	98.83%	96.94%	95.80%	3	1	4.952	3.802	1.97
23652	Monday, March 14, 2011	16:08	28.64	6.50	24.62	322.91	345.66	23.25	94.42%	99.63%	98.98%	98.62%	3	1	5.155	3.872	1.931
23651	Monday, March 14, 2011	15:10	27.41	6.65	23.21	302.35	323.72	21.83	94.03%	98.66%	95.92%	94.64%	3	1	5.117	3.962	1.97
23650	Monday, March 14, 2011	13:46	35.43	7.96	29.84	276.27	303.42	27.80	93.17%	98.67%	96.10%	94.82%	3	1	5.76	4.45	1.928
23649	Monday, March 14, 2011	12:34	42.95	8.86	35.89	245.51	277.48	32.90	91.69%	97.86%	95.81%	93.76%	3	1	6.294	4.57	1.881
23647	Monday, March 14, 2011	10:57	32.22	6.56	27.41	221.06	246.35	25.68	93.71%	98.85%	97.29%	96.17%	3	1	5.207	4.021	1.954
23646	Monday, March 14, 2011	9:59	28.46	9.78	19.72	203.21	221.52	18.51	93.85%	98.55%	95.93%	94.54%	2	1	4.836	4.034	1.94
23645	Monday, March 14, 2011	8:56	27.82	4.92	24.70	180.80	203.78	23.34	94.52%	99.07%	97.28%	96.38%	3	1	4.434	3.303	1.941
23644	Monday, March 14, 2011	8:00	27.41	6.60	23.27	159.81	181.37	21.85	93.91%	98.14%	96.57%	94.78%	3	1	5.097	3.761	1.988




PB S53 DIGITAL STATUS
S53 DIGITAL STATUS
PARAM* *SA* X-A/D X=TIME Y=I:VP321 ,I:VP521
*save BL-- Eng-U I= 0 I=-4 ,-3 ,-10 ,-10
s_MI AUTO F= 1 F= 6 , 7 , 10 , 10
.global. .linac.. .booster ...mi... ...tev.. ...sy... .p-bar.. .misc... collider
A:R1HLSC ARF1 Hi Lvl Stat/Cntrl
ARF1-2 PA Fault No 0
ARF1-2 Driver Fault No 0
ARF1-2 PA Timing Ready 0
ARF1-2 Driver Timing Ready 0
ARF1-2 PA Standby No 0
ARF1-2 Driver Standby No 0
ARF1-2 All Off 0
ARF1-2 Local/Remote Remote 0
ARF1-1 PA Fault Yes 1
ARF1-1 Driver Fault Yes 1
ARF1-1 PA Timing Ready 0
ARF1-1 Driver Timing Ready 0
ARF1-1 PA Standby No 0
ARF1-1 Driver Standby No 0
ARF1-1 All Off 0
ARF1-1 Local/Remote Remote 0
*On
*Off
*Reset
Local
Alarm is
ALARMING
Speech is
BYPASSED
Edit
Messages
PB P8 RF PARAMETERS
P8 ARF1 SET D/A A/D Com-U
-<FTP>+ *SA* X-A/D X=TIME Y=I:VP321 ,I:VP521
COMMAND BL-- Eng-U I= 0 I=-4 ,-3 ,-10 ,-10
-< 1>+ s_MI AUTO F= 1 F= 6 , 7 , 10 , 10
drf_1 tunsy drf_2 drf_3 ARF_1 arf_2 arf_3 arf_4 misc1 misc2 misc3
A:R1H1GS ARF1-1 Gap Short -.06 Inch
A:R1H2GS ARF1-2 Gap Short .099 Inch
A:RFREQ2 ACCUMULATR COUNTER #2 1.257795 MHz
A:R1L2AM ARF1-2 AMPLITUDE PGM. * 10.24 VOLT
A:R1LLEM ARF1 EXT FEED MODULATION
A:R1H1FB ARF1-1 Fanback Voltage .203 kV
A:R1H2FB ARF1-2 Fanback Voltage .689 kV
A:R1HLSC ARF1 Hi Lvl Stat/Cntrl -.055 kV
A:R1APSV ARF1 Anode Supply (Hip) -.055 KV
A:R1H1SC ARF1-1 Hi Lvl Stat/Cntrl
A:R1H2SC ARF1-2 Hi Lvl Stat/Cntrl
-A:R1LLT5 ARF1 LL RF switch ON .000001 .000001 SECS
-A:R1LLT6 ARF1 LL RF switch OFF .2 .2 SECS
A:BEAM Accumulator Beam Curr 10.69175 E10
! Please see 'RUN WITH BROKEN ARF1-x Cavity' agg
! IF YOU CHANGE THIS, YOU MUST RE-LOAD RF CURVE
! FROM P153 TO MAKE IT ACTIVE - DVM 11/11/07
! There are also alarms to move on D59!!
-A:R1MODE 0=both 1=arf1-1 2=arf 0 0 mcg
A:R1L1AM ARF1-1 AMPLITUDE * 10.24 VOLT
A:R1L2AM ARF1-2 AMPLITUDE PGM. * 10.24 VOLT



BPI719 didn't come back after the shutdown



Dump water skid still has a small leak